Top 30 "C" programs asked in interview,,.!!!  
  
Programs :  
  
1. Write a program to find factorial of the given number...  
2. Write a program to check whether the given number is even or odd.  
3. Write a program to swap two numbers using a temporary variable.  
4. Write a program to swap two numbers without using a temporary variable.  
5. Write a program to swap two numbers using bitwise operators.  
6. Write a program to find the greatest of three numbers.  
7. Write a program to find the greatest among ten numbers.  
8. Write a program to check whether the given number is a prime.  
9. Write a program to check whether the given number is a palindrome c number.  
10.Write a program to check whether the given string is a palindrome .  
11.Write a program to generate the Fibonacci series.  
12.Write a program to print"Hello World"without using semicolon anywhere in the code.  
13.Write a program to print a semicolon without using a semicolon anywhere in the code.  
14.Write a program to compare two strings without using strcmp() function.  
15.Write a program to concatenat e two strings without using strcat() function.  
16.Write a program to delete a specified line from a text file.  
17.Write a program to replace a specified line in a text file.  
18.Write a program to find the number of lines in a text file..  
19.Write a C program which asks the user for a number between 1 to 9 and shows the number. If the user  
inputs a number out of the specified range, the program should show an error and prompt the user for a  
valid input.  
20.Write a program to display the multiplica tion table of a given number..  
21.WAP to check a string is Caliondrom e or not. // Maventic question.  
22.WAP to print DONE,witho ut using any loop. // asked to my frnd in any company.  
23.WAP to print DONE,witho ut using any loop and any conditonal clause or operators. // asked to me as a cross question of 22th question by the person i asked 22th ques.  
24. WAP to find out the longest word in a string.  
25.Prog of WORLD MAP. // this code was written by someone,i forgot his name,he won award for this code as short and best c code. JUST FOR FUN //  
26.WAP to print the triangle of letters in increasing order of lines..  
27.WAP to print'xay'in place of every'a'in a string.// DOC Update on 24-jan-12.  
28.Count the Total Number of 7 comming between 1 to 100.  
/\* I made this code in a way that u can give Upper limit i.e. 100,Lower limit i.e. 1 and the specific number u wants to count in between i.e. 7 \*/ // asked by: Vishwa Pratap Rana..  
29. Code for duplicate' s removal,by Amit Aru.. // Similar question was asked in Maventic 2nd round to me,,  
30. WAP to find out if a given number is a power series of 2 or not,withou t any loop and without using % modulo operator.. // asked by someone on BJS..  
  
TO BE CONTINUED. ..!!!  
  
ANSWERS  
  
1. Write a program to find factorial of the given number.  
Recursion: A function is called'recursive 'if a statement within the body of a function calls the same function. It  
is also called'circular definition '. Recursion is thus a process of defining something in terms of itself.  
Program: To calculate the factorial value using recursion.  
[‪#‎include‬](https://www.facebook.com/hashtag/include)  
int fact(int n);  
int main(){  
int x, i;  
printf("En ter a value for x: \n");  
scanf("%d" ,&x);  
i = fact(x);  
printf("\n Factorial of %d is %d", x, i);  
return 0;  
}int fact(int n){  
/\* n=0 indicates a terminatin g condition \*/  
if (n  
return (1);  
}else{  
/\* function calling itself \*/  
return (n \* fact(n - 1));  
/\*n\*fact(n -1) is a recursive expression \*/  
}  
}  
Output:  
Enter a value for x:  
4  
Factorial of 4 is 24  
Explanatio n:  
fact(n) = n \* fact(n-1)  
If n=4  
fact(4) = 4 \* fact(3) there is a call to fact(3)  
fact(3) = 3 \* fact(2)  
fact(2) = 2 \* fact(1)  
fact(1) = 1 \* fact(0)  
fact(0) = 1  
fact(1) = 1 \* 1 = 1  
fact(2) = 2 \* 1 = 2  
fact(3) = 3 \* 2 = 6  
Thus fact(4) = 4 \* 6 = 24  
Terminatin g condition( n  
infinite loop.  
  
2. Write a program to check whether the given number is even or odd.  
Program:  
#include  
int main(){  
int a;  
printf("En ter a: \n");  
scanf("%d" ,&a);  
/\* logic \*/  
if (a % 2 == 0){  
printf("Th e given number is EVEN\n");  
}  
else{  
printf("Th e given number is ODD\n");  
}  
return 0;  
}  
Output:  
Enter a: 2  
The given number is EVEN  
Explanatio n with examples:  
Example 1: If entered number is an even number  
Let value of'a'entered is 4  
if(a%2==0) then a is an even number, else odd.  
i.e. if(4%2==0) then 4 is an even number, else odd.  
To check whether 4 is even or odd, we need to calculate (4%2).  
/\* % (modulus) implies remainder value. \*/  
/\* Therefore if the remainder obtained when 4 is divided by 2 is 0, then 4 is even. \*/  
4%2==0 is true  
Thus 4 is an even number.  
Example 2: If entered number is an odd number.  
Let value of'a'entered is 7  
if(a%2==0) then a is an even number, else odd.  
i.e. if(7%2==0) then 4 is an even number, else odd.  
To check whether 7 is even or odd, we need to calculate (7%2).  
7%2==0 is false /\* 7%2==1 condition fails and else part is executed \*/  
Thus 7 is an odd number.  
  
3. Write a program to swap two numbers using a temporary variable.  
Swapping interchang es the values of two given variables.  
Logic:  
step1: temp=x;  
step2: x=y;  
step3: y=temp;  
Example:  
if x=5 and y=8, consider a temporary variable temp.  
step1: temp=x=5;  
step2: x=y=8;  
step3: y=temp=5;  
Thus the values of the variables x and y are interchang ed.  
Program:  
#include  
int main(){  
int a, b, temp;  
printf("En ter the value of a and b: \n");  
scanf("%d %d",&a,&b);  
printf("Be fore swapping a=%d, b=%d \n", a, b);  
/\*Swapping logic \*/  
temp = a;  
a = b;  
b = temp;  
printf("Af ter swapping a=%d, b=%d", a, b);  
return 0;  
}  
Output:  
Enter the values of a and b: 2 3  
Before swapping a=2, b=3  
After swapping a=3, b=2  
4. Write a program to swap two numbers without using a temporary variable.  
Swapping interchang es the values of two given variables.  
Logic:  
step1: x=x+y;  
step2: y=x-y;  
step3: x=x-y;  
Example:  
if x=7 and y=4  
step1: x=7+4=11;  
step2: y=11-4=7;  
step3: x=11-7=4;  
Thus the values of the variables x and y are interchang ed.  
Program:  
#include  
int main(){  
int a, b;  
printf("En ter values of a and b: \n");  
scanf("%d %d",&a,&b);  
printf("Be fore swapping a=%d, b=%d\n", a,b);  
/\*Swapping logic \*/  
a = a + b;  
b = a - b;  
a = a - b;  
printf("Af ter swapping a=%d b=%d\n", a, b);  
return 0;  
}  
Output:  
Enter values of a and b: 2 3  
Before swapping a=2, b=3  
The values after swapping are a=3 b=2  
  
5. Write a program to swap two numbers using bitwise operators.  
Program:  
#include  
int main(){  
int i = 65;  
int k = 120;  
printf("\n value of i=%d k=%d before swapping", i, k);  
i = i ^ k;  
k = i ^ k;  
i = i ^ k;  
printf("\n value of i=%d k=%d after swapping", i, k);  
return 0;  
}  
Explanatio n:  
i = 65; binary equivalent of 65 is 0100 0001  
k = 120; binary equivalent of 120 is 0111 1000  
i = i^k;  
i...0100 0001  
k...0111 1000  
---------  
val of i = 0011 1001  
---------  
k = i^k  
i...0011 1001  
k...0111 1000  
---------  
val of k = 0100 0001 binary equivalent of this is 65  
---------( that is the initial value of i)  
i = i^k  
i...0011 1001  
k...0100 0001  
---------  
val of i = 0111 1000 binary equivalent of this is 120  
--------- (that is the initial value of k)  
  
6. Write a program to find the greatest of three numbers.  
Program:  
#include  
int main(){  
int a, b, c;  
printf("En ter a,b,c: \n");  
scanf("%d %d %d",&a,&b,&c);  
if (a>b&&a>c){  
printf("a is Greater than b and c");  
}  
else if (b>a&&b>c){  
printf("b is Greater than a and c");  
}  
else if (c>a&&c>b){  
printf("c is Greater than a and b");  
}  
else{  
printf("al l are equal or any two values are equal");  
}  
return 0;  
}  
Output:  
Enter a,b,c: 3 5 8  
c is Greater than a and b  
Explanatio n with examples:  
Consider three numbers a=5,b=4,c= 8  
if(a>b&&a>c) then a is greater than b and c  
now check this condition for the three numbers 5,4,8 i.e.  
if(5>4&&5>8) /\* 5>4 is true but 5>8 fails \*/  
so the control shifts to else if condition  
else if(b>a&&b>c) then b is greater than a and c  
now checking this condition for 5,4,8 i.e.  
else if(4>5&&4>8) / \* both the conditions fail \*/  
now the control shifts to the next else if condition  
else if(c>a&&c>b) then c is greater than a and b  
now checking this condition for 5,4,8 i.e.  
else if(8>5&&8>4) / \* both conditions are satisfied \*/  
Thus c is greater than a and b.  
  
7. Write a program to find the greatest among ten numbers.  
Program:  
#include  
int main(){  
int a[10];  
int i;  
int greatest;  
printf("En ter ten values:");  
//Store 10 numbers in an array  
for (i = 0; i<10; i++){  
scanf("%d" ,&a[i]);  
}  
//Assume that a[0] is greatest  
greatest = a[0];  
for (i = 0; i<10; i++){  
if (a[i]>greatest){  
greatest = a[i];  
}  
}  
printf("\n Greatest of ten numbers is %d", greatest);  
return 0;  
}  
Output:  
Enter ten values: 2 53 65 3 88 8 14 5 77 64 Greatest of ten numbers is 88  
Explanatio n with example:  
Entered values are 2, 53, 65, 3, 88, 8, 14, 5, 77, 64  
They are stored in an array of size 10. let a[] be an array holding these values.  
/\* how the greatest among ten numbers is found \*/  
Let us consider a variable'greatest' . At the beginning of the loop, variable'greatest' is assinged with the value of  
first element in the array greatest=a [0]. Here variable'greatest' is assigned 2 as a[0]=2.  
Below loop is executed until end of the array'a[]';.  
for(i=0; i  
{  
if(a[i]>gr eatest)  
{  
greatest= a[i];  
}  
}  
For each value of'i', value of a[i] is compared with value of variable'greatest' . If any value greater than the value  
of'greatest' is encountere d, it would be replaced by a[i]. After completion of'for'loop, the value of variable  
'greatest' holds the greatest number in the array. In this case 88 is the greatest of all the numbers.  
8. Write a program to check whether the given number is a prime.  
A prime number is a natural number that has only one and itself as factors. Examples: 2, 3, 13 are prime  
numbers.  
Program:  
#include  
main(){  
int n, i, c = 0;  
printf("En ter any number n: \n");  
scanf("%d" ,&n);  
/\*logic\*/  
for (i = 1; i  
if (n % i == 0){  
c++;  
}  
}  
if (c == 2){  
printf("n is a Prime number");  
}  
else{  
printf("n is not a Prime number");  
}  
return 0;  
}  
Output:  
Enter any number n: 7  
n is Prime  
Explanatio n with examples:  
consider a number n=5  
for(i=0;i  
i.e. for(i=0;i  
1st iteration: i=1;i  
here i is incremente d i.e. i value for next iteration is 2  
now if(n%i==0) then c is incremente d  
i.e.if(5%1 ==0)then c is incremente d, here 5%1=0 thus c is incremente d.  
now c=1;  
2nd iteration: i=2;i  
here i is incremente d i.e. i value for next iteration is 3  
now if(n%i==0) then c is incremente d  
i.e.if(5%2 ==0) then c is incremente d, but 5%2!=0 and so c is not incremente d, c remains 1  
c=1;  
3rd iteration: i=3;i  
here i is incremente d i.e. i value for next iteration is 4  
now if(n%i==0) then c is incremente d  
i.e.if(5%3 ==0) then c ic incremente d, but 5%3!=0 and so c is not incremente d, c remains 1  
c=1;  
4th iteration: i=4;i  
here i is incremente d i.e. i value for next iteration is 5  
now if(n%i==0) then c is incremente d  
i.e. if(5%4==0) then c is incremente d, but 5%4!=0 and so c is not incremente d, c remains 1  
c=1;  
5th iteration: i=5;i  
here i is incremente d i.e. i value for next iteration is 6  
now if(n%i==0) then c is incremente d  
i.e. if(5%5==0) then c is incremente d, 5%5=0 and so c is incremente d.  
i.e. c=2  
6th iteration: i=6;i  
here i value is 6 and 6  
now if(c==2) then n is a prime number  
we have c=2 from the 5th iteration and thus n=5 is a Prime number.  
  
9. Write a program to check whether the given number is a palindromi c number.  
If a number, which when read in both forward and backward way is same, then such a number is called a  
palindrome number.  
Program:  
#include  
int main(){  
int n, n1, rev = 0, rem;  
printf("En ter any number: \n");  
scanf("%d" ,&n);  
n1 = n;  
/\* logic \*/  
while (n>0){  
rem = n % 10;  
rev = rev \* 10 + rem;  
n = n / 10;  
}  
if (n1 == rev){  
printf("Gi ven number is a palindromi c number");  
}  
else{  
printf("Gi ven number is not a palindromi c number");  
}  
return 0;  
}  
Output:  
Enter any number: 121  
Given number is a palindrome  
Explanatio n with an example:  
Consider a number n=121, reverse=0, remainder;  
number=121  
now the while loop is executed /\* the condition (n>0) is satisfied \*/  
/\* calculate remainder \*/  
remainder of 121 divided by 10=(121%10 )=1;  
now reverse=(r everse\*10) +remainder  
=(0\*10)+1 / \* we have initialized reverse=0 \*/  
=1  
number=num ber/10  
=121/10  
=12  
now the number is 12, greater than 0. The above process is repeated for number=12.  
remainder= 12%10=2;  
reverse=(1 \*10)+2=12;  
number=12/ 10=1;  
now the number is 1, greater than 0. The above process is repeated for number=1.  
remainder= 1%10=1;  
reverse=(1 2\*10)+1=12 1;  
number=1/ 10 / \* the condition n>0 is not satisfied,co ntrol leaves the while loop \*/  
Program stops here. The given number=121 equals the reverse of the number. Thus the given number is a  
palindrome number.  
  
10.Write a program to check whether the given string is a palindrome .  
Palindrome is a string, which when read in both forward and backward way is same.  
Example: radar, madam, pop, lol, rubber, etc.,  
Program:  
#include  
#include  
int main(){  
char string1[20 ];  
int i, length;  
int flag = 0;  
printf("En ter a string: \n");  
scanf("%s" , string1);  
length = strlen(str ing1);  
for(i=0;i<length ;i++){  
if(string1 [i] != string1[le ngth-i-1]) {  
flag = 1;  
break;  
}  
}  
if (flag){  
printf("%s is not a palindrome \n", string1);  
}  
else{  
printf("%s is a palindrome \n", string1);  
}  
return 0;  
}  
Output:  
Enter a string: radar  
"radar"is a palindrome  
Explanatio n with example:  
To check if a string is a palindrome or not, a string needs to be compared with the reverse of itself.  
Consider a palindrome string:"radar",  
---------- ---------- -------  
index: 0 1 2 3 4  
value: r a d a r  
---------- ---------- -------  
To compare it with the reverse of itself, the following logic is used:  
0th character in the char array, string1 is same as 4th character in the same string.  
1st character is same as 3rd character.  
2nd character is same as 2nd character.  
. . . .  
ith character is same as'length-i- 1'th character.  
If any one of the above condition fails, flag is set to true(1), which implies that the string is not a palindrome .  
By default, the value of flag is false(0). Hence, if all the conditions are satisfied, the string is a palindrome .  
  
11.Write a program to generate the Fibonacci series.  
Fibonacci series: Any number in the series is obtained by adding the previous two numbers of the series.  
Let f(n) be n'th term.  
f(0)=0;  
f(1)=1;  
f(n)=f(n-1 )+f(n-2); (for n>=2)  
Series is as follows  
011  
(1+0)  
2 (1+1)  
3 (1+2)  
5 (2+3)  
8 (3+5)  
13 (5+8)  
21 (8+13)  
34 (13+21)  
...and so on  
Program: to generate Fibonacci Series(10 terms)  
#include  
int main(){  
//array fib stores numbers of fibonacci series  
int i, fib[25];  
// initialized first element to 0  
fib[0] = 0;  
// initialized second element to 1  
fib[1] = 1;  
//loop to generate ten elements  
for (i = 2; i<10; i++){  
//i'th element of series is equal to the sum of i-1'th element and i-2'th element.  
fib[i] = fib[i - 1] + fib[i - 2];  
}  
printf("Th e fibonacci series is as follows \n");  
//print all numbers in the series  
for (i = 0; i<10; i++){  
printf("%d \n", fib[i]);  
}  
return 0;  
}  
Output:  
The fibonacci series is as follows  
01123581  
3  
21  
34  
Explanatio n:  
The first two elements are initialize d to 0, 1 respective ly. Other elements in the series are generated by looping  
and adding previous two numbes. These numbers are stored in an array and ten elements of the series are  
printed as output.  
  
12.Write a program to print"Hello World"without using semicolon anywhere in the code.  
Generally when we use printf("") statement, we have to use a semicolon at the end. If printf is used inside an if  
Condition, semicolon can be avoided.  
Program: Program to print something without using semicolon (;)  
#include  
int main(){  
//printf returns the length of string being printed  
if (printf("H ello World\n")) //prints Hello World and returns 11  
{  
//do nothing  
}  
return 0;  
}  
Output:  
Hello World  
Explanatio n:  
The if statement checks for condition whether the return value of printf("He llo World") is greater than 0. printf  
function returns the length of the string printed. Hence the statement if (printf("H ello World")) prints the string  
"Hello World".  
  
13.Write a program to print a semicolon without using a semicolon anywhere in the code.  
Generally when use printf("") statement we have to use semicolon at the end.  
If we want to print a semicolon, we use the statement: printf(";" );  
In above statement, we are using two semicolons . The task of printing a semicolon without using semicolon anywhere in the code can be accomplish ed by using the ascii value of';'which is equal to 59.  
Program: Program to print a semicolon without using semicolon in the code.  
#include  
int main(void) {  
//prints the character with ascii value 59, i.e., semicolon  
if (printf("% c\n", 59)){  
//prints semicolon  
}  
return 0;  
}  
Output:  
;  
Explanatio n:  
If statement checks whether return value of printf function is greater than zero or not. The return value of function  
call printf("%c ",59) is 1. As printf returns the length of the string printed. printf("%c ",59) prints ascii value that  
correspond s to 59, that is semicolon( .  
  
14.Write a program to compare two strings without using strcmp() function.  
strcmp() function compares two strings lexicograp hically. strcmp is declared in stdio.h  
Case 1: when the strings are equal, it returns zero.  
Case 2: when the strings are unequal, it returns the difference between ascii values of the characters that differ.  
a) When string1 is greater than string2, it returns positive value.  
b) When string1 is lesser than string2, it returns negative value.  
Syntax:  
int strcmp (const char \*s1, const char \*s2);  
Program: to compare two strings.  
#include  
#include  
int cmpstr(cha r s1[10], char s2[10]);  
int main(){  
char arr1[10] ="Nodalo";  
char arr2[10] ="nodalo";  
printf("%d", cmpstr(arr 1, arr2));  
// cmpstr() is equivalent of strcmp()  
return 0;  
}/  
/s1, s2 are strings to be compared  
int cmpstr(cha r s1[10], char s2[10]){  
//strlen function returns the length of argument string passed  
int i = strlen(s1) ;  
int k = strlen(s2) ;  
int bigger;  
if (i<k){  
bigger = k;  
}  
else if (i>k){  
bigger = i;  
}  
else{  
bigger = i;  
}  
//loops'bigger'times  
for (i = 0; i<bigger; i++){  
// if ascii values of characters s1[i], s2[i] are equal do nothing  
if (s1[i] == s2[i]){  
}  
//else return the ascii difference  
else{  
return (s1[i] - s2[i]);  
}  
}  
//return 0 when both strings are same  
//This statement is executed only when both strings are equal  
return (0);  
}  
Output:  
-32  
Explanatio n:  
cmpstr() is a function that illustrate s C standard function strcmp(). Strings to be compared are sent as arguments  
to cmpstr().  
Each character in string1 is compared to its correspond ing character in string2. Once the loop encounters a  
differing character in the strings, it would return the ascii difference of the differing characters and exit.  
  
15.Write a program to concatenat e two strings without using strcat() function.  
strcat(str ing1,strin g2) is a C standard function declared in the header file string.h  
The strcat() function concatenat es string2, string1 and returns string1.  
Program: Program to concatenat e two strings  
#include  
#include  
char \*strct(cha r \*c1, char \*c2);  
char \*strct(cha r \*c1, char \*c2){  
//strlen function returns length of argument string  
int i = strlen(c1) ;  
int k = 0;  
// loops until null is encountered and appends string c2 to c1  
while (c2[k] !='\0'){  
c1[i + k] = c2[k];  
k++;  
}  
return c1;  
}  
int main(){  
char string1[15 ] ="first";  
char string2[15 ] ="second";  
char \*finalstr;  
printf("Be fore concatenat ion:"  
"\n string1 = %s \n string2 = %s", string1, string2);  
// addresses of string1, string2 are passed to strct()  
finalstr = strcat(str ing1, string2);  
printf("\n After concatenat ion:");  
//prints the contents of string whose address is in finalstr  
printf("\n finalstr = %s", finalstr);  
//prints the contents of string1  
printf("\n string1 = %s", string1);  
//prints the contents of string2  
printf("\n string2 = %s", string2);  
return 0;  
}  
Output:  
Before concatenat ion:  
string1 = first  
string2 = second  
After concatenat ion:  
finalstr = firstsecon d  
string1 = firstsecon d  
string2 = second  
Explanatio n:  
string2 is appended at the end of string1 and contents of string2 are unchanged.  
In strct() function, using a for loop, all the characters of string'c2'are copied at the end of c1. return (c1) is  
equivalent to return&c1[0] and it returns the base address of'c1'.'finalstr' stores that address returned by the  
function strct().  
  
16.Write a program to delete a specified line from a text file.  
In this program, user is asked for a filename he needs to change. User is also asked for the line number that is  
to be deleted. The filename is stored in'filename' . The file is opened and all the data is transferre d to another file  
except that one line the user specifies to delete.  
Program: Program to delete a specific line.  
#include  
int main(){  
FILE \*fp1, \*fp2;  
// consider 40 character string to store filename  
char filename[4 0];  
char c;  
int del\_line, temp = 1;  
//asks user for file name  
printf("En ter file name:");  
// receives file name from user and stores in'filename'  
scanf("%s" , filename);  
//open file in read mode  
fp1 = fopen(file name,"r");  
c = getc(fp1);  
//until the last character of file is obtained  
while (c != EOF)  
{  
printf("%c ", c);  
//print current character and read next character  
c = getc(fp1);  
}  
//rewind  
rewind(fp1 );  
printf("\n Enter line number of the line to be deleted:") ;  
//accept number from user.  
scanf("%d" ,&del\_line) ;  
//open new file in write mode  
fp2 = fopen("cop y.c","w");  
c = getc(fp1);  
while (c != EOF){  
c = getc(fp1);  
if (c =='\n')  
temp++;  
//except the line to be deleted  
if (temp != del\_line)  
{  
//copy all lines in file copy.c  
putc(c, fp2);  
}  
}  
//close both the files.  
fclose(fp1 );  
fclose(fp2 );  
//remove original file  
remove(fil ename);  
//rename the file copy.c to original name  
rename("co py.c", filename);  
printf("\n The contents of file after being modified are as follows:\n ");  
fp1 = fopen(file name,"r");  
c = getc(fp1);  
while (c != EOF){  
printf("%c ", c);  
c = getc(fp1);  
}  
fclose(fp1 );  
return 0;  
}  
Output:  
Enter file name:abc.t xt  
hi.  
Hello  
how are you?  
I am fine  
hope the same  
Enter line number of the line to be deleted:4  
The contents of file after being modified are as follows:  
hi.  
hello  
how are you?  
hope the same  
Explanatio n:  
In this program, user is asked for a filename that needs to be modified. Entered file name is stored in a char  
array'filename' . This file is opened in read mode using file pointer'fp1'. Character'c'is used to read characters  
from the file and print them to the output. User is asked for the line number in the file to be deleted. The file  
pointer is rewinded back and all the lines of the file except for the line to be deleted are copied into another file  
"copy.c". Now"copy.c"is renamed to the original filename. The original file is opened in read mode and the  
modified contents of the file are displayed on the screen.  
  
17.Write a program to replace a specified line in a text file.  
Program: Program to replace a specified line in a text file.  
#include  
int main(void) {  
FILE \*fp1, \*fp2;  
// 'filename'i s a 40 character string to store filename  
char filename[4 0];  
char c;  
int del\_line, temp = 1;  
//asks user for file name  
printf("En ter file name:");  
// receives file name from user and stores in'filename'  
scanf("%s" , filename);  
fp1 = fopen(file name,"r");  
//open file in read mode  
c = getc(fp1);  
//print the contents of file .  
while (c != EOF){  
printf("%c ", c);  
c = getc(fp1);  
}  
//ask user for line number to be deleted.  
printf("\n Enter line number to be deleted and replaced") ;  
scanf("%d" ,&del\_line) ;  
//take fp1 to start point.  
rewind(fp1 );  
//open copy.c in write mode  
fp2 = fopen("cop y.c","w");  
c = getc(fp1);  
while (c != EOF){  
if (c =='\n'){  
temp++;  
}  
// till the line to be deleted comes,copy the content from one file to other  
if (temp != del\_line){  
putc(c, fp2);  
}  
else //when the line to be deleted comes  
{  
while ((c = getc(fp1)) !='\n'){  
}  
//read and skip the line ask for new text  
printf("En ter new text");  
//flush the input stream  
fflush(std in);  
putc('\n', fp2);  
//put'\n'in new file  
while ((c = getchar()) !='\n')  
putc(c, fp2);  
//take the data from user and place it in new file  
fputs("\n" , fp2);  
temp++;  
}  
// continue this till EOF is encountere d  
c = getc(fp1);  
}  
//close both files  
fclose(fp1 );  
fclose(fp2 );  
//remove original file  
remove(fil ename);  
//rename new file with old name opens the file in read mode  
rename("co py.c", filename);  
fp1 = fopen(file name,"r");  
//reads the character from file  
c = getc(fp1);  
// until last character of file is encountered  
while (c != EOF){  
printf("%c ", c);  
// all characters are printed  
c = getc(fp1);  
}  
//close the file pointer  
fclose(fp1 );  
return 0;  
}  
Output:  
Enter file name:abc.t xt  
hi.  
hello  
how are you?  
hope the same  
Enter line number of the line to be deleted and replaced:4  
Enter new text: sayonara see you soon  
hi.  
hello  
how are you?  
sayonara see you soon  
Explanatio n:  
In this program, the user is asked to type the name of the file. The File by name entered by user is opened in  
read mode. The line number of the line to be replaced is asked as input. Next the data to be replaced is asked. A  
new file is opened in write mode named"copy.c". Now the contents of original file are transferre d into new file  
and the line to be modified is deleted. New data is stored in its place and remaining lines of the original file are  
also transferre d. The copied file with modified contents is replaced with the original file's name. Both the file  
pointers are closed and the original file is again opened in read mode and the contents of the original file is  
printed as output.  
  
18.Write a program to find the number of lines in a text file.  
Number of lines in a file can be determined by counting the number of new line characters present.  
Program: Program to count number of lines in a file.  
#include  
int main()  
/\* Ask for a filename and count number of lines in the file\*/  
{  
//a pointer to a FILE structure  
FILE \*fp;  
int no\_lines = 0;  
// consider 40 character string to store filename  
char filename[4 0], sample\_chr ;  
//asks user for file name  
printf("En ter file name:");  
// receives file name from user and stores in a string named'filename'  
scanf("%s" , filename);  
//open file in read mode  
fp = fopen(file name,"r");  
//get character from file and store in sample\_chr  
sample\_chr = getc(fp);  
while (sample\_ch r != EOF){  
// Count whenever sample\_chr is'\n'(new line) is encountere d  
if (sample\_ch r =='\n')  
{  
// increment variable'no\_lines' by 1  
no\_lines=n o\_lines+1;  
}  
//take next character from file.  
sample\_chr = getc(fp);  
}  
fclose(fp) ; //close file.  
printf("Th ere are %d lines in %s \n", no\_lines, filename);  
return 0;  
}  
Output:  
Enter file name:abc.t xt  
There are 4 lines in abc.txt  
Explanatio n:  
In this program, name of the file to be read is taken as input. A file by the given name is opened in read-mode  
using a File pointer'fp'. Characters from the file are read into a char variable'sample\_ch r'with the help of getc  
function. If a new line character( '\n') is encountere d, the integer variable'no\_lines' is incremente d. If the  
character read into'sample\_ch ar'is not a new line character, next character is read from the file. This process is  
continued until the last character of the file(EOF) is encountere d. The file pointer is then closed and the total  
number of lines is shown as output.  
  
19.Write a C program which asks the user for a number between 1 to 9 and shows the number. If the  
user inputs a number out of the specified range, the program should show an error and prompt  
the user for a valid input.  
Program: Program for accepting a number in a given range.  
#include  
int getnumber( );  
int main(){  
int input = 0;  
//call a function to input number from key board  
input = getnumber( );  
//when input is not in the range of 1 to 9,print error message  
while (!((input = 1))){  
printf("[E RROR] The number you entered is out of range");  
//input another number  
input = getnumber( );  
}  
//this function is repeated until a valid input is given by user.  
printf("\n The number you entered is %d", input);  
return 0;  
}/  
/this function returns the number given by user  
int getnumber( ){  
int number;  
//asks user for a input in given range  
printf("\n Enter a number between 1 to 9 \n");  
scanf("%d" ,&number);  
return (number);  
}  
Output:  
Enter a number between 1 to 9  
45  
[ERROR] The number you entered is out of range  
Enter a number between 1 to 9  
4  
The number you entered is 4  
Explanatio n:  
getfunctio n() function accepts input from user.'while'loop checks whether the number falls within range or not  
and accordingl y either prints the number(If the number falls in desired range) or shows error message(nu mber is  
out of range).  
20.Write a program to display the multiplica tion table of a given number.  
Program: Multiplica tion table of a given number  
#include  
int main(){  
int num, i = 1;  
printf("\n Enter any Number:");  
scanf("%d" ,&num);  
printf("Mu ltiplicati on table of %d: \n", num);  
while (i  
printf("\n %d x %d = %d", num, i, num \* i);  
i++;  
}  
return 0;  
}  
Output:  
Enter any Number:5  
5 x 1 = 5  
5 x 2 = 10  
5 x 3 = 15  
5 x 4 = 20  
5 x 5 = 25  
5 x 6 = 30  
5 x 7 = 35  
5 x 8 = 40  
5 x 9 = 45  
5 x 10 = 50  
Explanatio n:  
We need to multiply the given number (i.e. the number for which we want the multiplica tion table)  
with value of'i'which increments from 1 to 10.  
  
21. .WAP to check a string is Caliondrom e or not. // Maventic question.  
#include  
#include  
void main()  
{  
int i,j=0; char a[100];  
clrscr();  
printf("\n Enter the string to check for caliondrom e:\n");  
gets(a);  
  
if(strlen( a)%6)  
{  
printf("\n %s: is Not a caliondrom e..",a);  
getch();  
exit(0);  
}  
for (i=0;a[i]! ='\0'  
{  
if((a[i]== a[i+5])&&( a[i+1]==a[ i+4])&&(a[ i+2]==a[i+ 3]))  
i=i+6;  
  
else  
{  
j=1;  
break;  
}  
}  
if(j)  
printf("\n %s: is Not a caliondrom e..",a);  
else  
printf("\n %s: is a caliondrom e..",a);  
getch();  
}  
  
22.WAP to print DONE,witho ut using any loop. // asked to my frnd in any company.  
#include  
void main()  
{  
static int i=0;  
printf("\n %d. DONE",i);  
if(i++  
main();  
getch();  
exit(0); / \* I used exit(0) to terminate the program after 100 DONE,,i dunno why it was not terminating without using it,may be just at my system,try without it at ur sustem,it sud work \*/  
}  
  
23.WAP to print DONE,witho ut using any loop and any conditonal clause or operators.  
  
/\* This code is just in purpose to solve the above question,, but its not a good code in programmin g,as its terminatin g at divide error,,if anyone have a better code,let me know \*/  
  
main()  
{  
static int i=100;  
printf("%d . DONE\n",10 1-i);  
main(1/ --i);  
}  
  
/\* use"ctrl+f9",then"alt+f5"to see the result \*/  
  
24. WAP to find out the longest word in a string.  
#include  
#include  
#include  
void main()  
{  
int i,max=0,co unt=0,j;  
char str[100]; / \* ={"INDIA IS DEMOCRATIC COUNTRY"}; u can use a string inside,in place of user input \*/  
  
printf("\n Enter the string\n:" );  
gets(str);  
  
for(i=0;i  
{  
if(!(str[i ]==32))  
{  
count++;  
}  
else  
{  
  
if(max  
{  
j=i-count;  
max=count;  
}  
count=0;  
}  
}  
for(i=j;i  
printf("%c ",str[i]);  
getch();  
}  
  
25.Prog of WORLD MAP.  
#include main(l ,a,n,d)cha r\*\*a;{for(d=atoi (a[1])/ 10\*80- atoi(a[2]) / 5-596;n="@N KA\CLCCGZA AQBEAADAFa ISADJABBA^ \SNLGAQABD AXIMBAACTB ATAHDBAN\Z cEMMCCCCAA hEIJFAEAAA BAfHJE\TBd FLDAANEfDN BPHdBcBBBE A\_AL\ H E L L O, W O R L D!"[l++-3];)f or(;n-->64 putchar(!d +++33^ l&1);print f("\n\n\n\ n\t\tFound By:\n\t\t\ t Amit Aru");getc h();}  
  
26.WAP to print the triangle of letters in increasing order of lines.  
  
#include  
#include  
void main()  
{  
int i,j,k;  
char ch;  
printf("\n Enter the number of lines wants to make the triangle \n:");  
scanf("%d" ,&i);  
for(j=1;j  
{  
ch=65;  
for(k=1;k  
{  
printf("%c ",ch++);  
}  
printf("\n ");  
}  
getch();  
}  
  
27.WAP to print'xay'in place of every'a'in a string.  
  
#include  
#include  
void main()  
{  
int i=0;  
char str[100],x ='x',y='y' ;  
printf("En ter the string\n:");  
gets(str);  
while(str[ i]!='\0')  
{  
if(str[i]= ='a')  
{  
printf("%c ",x);  
printf("%c ",str[i++] );  
printf("%c ",y);  
}  
else  
{  
printf("%c ",str[i++] );  
}  
}  
getch();  
}  
  
28.Count the Total Number of 7 comming between 1 to 100.  
  
/\* I made this code in a way that u can give Upper limit i.e. 100,Lower limit i.e. 1 and the specific number u wants to count in between i.e. 7 \*/  
  
#include  
#include  
void main()  
{  
int i,j,U=100, L=1,count= 0,r=1,n;  
clrscr();  
printf("\n Enter the number u wants to count\n:");  
scanf("%d" ,&n);  
printf("\n Enter the lower limit\n:");  
scanf("%d" ,&L);  
printf("\n Enter the upper limit\n:");  
scanf("%d" ,&U);  
  
for (i=L;i  
{  
j=i;  
while(j)  
{  
r=j%10;  
if (r==n)  
{  
count++;  
}  
j=j/10;  
}  
}  
if(n==0&&L ==0)  
count++;  
printf("\n Total Number of %d between %d and %d = %d",n,L,U, count);  
getch();  
}  
  
29. Code for duplicate' s removal,by Amit Aru.  
#include  
#include  
void main()  
{  
int i,j,k=0,co unt[300]={ 0};  
char ch,str[100 0],str1[10 00];  
clrscr();  
printf("\n Enter the string to remove duplicasy\ n:");  
gets(str);  
for (i=0;str[i ]!='\0';i+ +)  
{  
ch=str[i];  
count['']=0; / \* U can use other delimiter inplace of space''here,just put that char inside'',for ex: count['A']=0 ; if u dnt want any delimiter, just remove this line.\*/  
  
if(count[c h])  
continue;  
else  
{  
str1[k++]= ch;  
count[ch]= 1;  
}  
}  
puts(str1) ;  
getch();  
}  
  
30. WAP to find out if a given number is a power series of 2 or not,withou t any loop and without using % modulo operator.  
  
#include  
#include  
int pow2(float );  
void main()  
{  
int i,flag;  
clrscr();  
printf("En ter the number\n") ;  
scanf("%d" ,&i);  
flag=pow2( i);  
if(flag)  
printf("\n %d is power series of 2",i);  
else  
printf("\n %d is not a power series of 2",i);  
getch();  
}  
  
int pow2(float j)  
{  
static float x;  
x=j/2;  
if(x==2)  
return 1;  
if(x  
return 0;  
x=pow2(x);  
}